

DEVELOPMENT OF VALUE ADDED PRODUCTS AS MUFFINS FROM BANANA (*MUSA PARADISIACAL*)

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ABSTRACT

Raw bananas exhibit a high nutritional value. This study aimed to perform a literature review on the banana and its possible use in the food industry. The term Muffin typically refers to an individual-sized quick bread product which can be sweet or savoury. Banana muffins were prepared by using banana pulp, sugar, spices as cardamom. Banana muffins are the rich source of solids, vitamins which help to rebuild the immune system. Banana muffins are the great source of great nutritional value & high energy value, tissue-building elements, vitamins, proteins & minerals. It is developed and easily made which is acceptable to various kinds of group of people who usually avoid consuming fruits but are affectionate to the dessert products. Banana muffins have such several health benefits as well as it contains vitamins like Riboflavin (B2), Niacin (B3), Vit B6, Vit c, minerals, magnesium, phosphorus, potassium, sodium. It is sweet, healthy and acts as a great snack in between the meals. The muffins were prepared as per texture, colour, taste, flavour, and overall acceptability of finished product which was observed by the panellist.

Keywords: *individual-sized, healthy, great snack, rebuild the immune system, tissue-building.*

1. INTRODUCTION

The term Muffin typically refers to an individual-sized quick bread product which can be sweet or savoury. The typical American muffin is similar to a cupcake in size and cooking methods. These can come in both savoury varieties,

such as corn or cheese muffins, and sweet varieties such as blueberry or banana.

Muffin also refers to a flatter disk-shaped bread of English origin, commonly referred to as an English muffin outside the United Kingdom. These muffins are

also popular in Commonwealth countries and the United States.

Bananas are the fruit of *Musa acuminata*. *Acuminata* means long pointed or tapering, not referring to the fruit, but the flowers giving birth to the fruit. Antonius Musa was the personal physician to Roman emperor Octavius Augustus, and it was he who was credited for promoting the cultivation of the exotic African fruit from 63 to 14 B.C.

Portuguese sailors brought bananas to Europe from West Africa in the early fifteenth century. Its Guinean name *banana*, which became *banana* in English, was first found in print in the seventeenth century. The original banana has been cultivated and used since ancient times, even predating the cultivation of rice. While the banana thrived in Africa, its origins are said to be of East Asia and Oceania. The banana was carried by sailors to the Canary Islands and the West Indies, finally making it to North America with Spanish missionary Friar Tomas de Berlanga.

Banana has health benefits like Reduced risk of high blood pressure, Reduced risk of stroke Restore normal bowel activity, Protection from ulcers & heart, burn remedy, Cholesterol-lowering effect, Perfect Baby food, Kidney health, Energy boosters and Immunity booster

Banana muffins are the rich source of solids, vitamins which help to rebuild the immune system. Banana muffins are the great source of great nutritional value & high energy value, tissue-building elements, vitamins, proteins & minerals. It is developed and easily made which is acceptable to various kinds of group of people who usually avoid consuming fruits but are affectionate to the dessert products. It also helps in providing high nutritive value.

2. MATERIALS AND METHOD

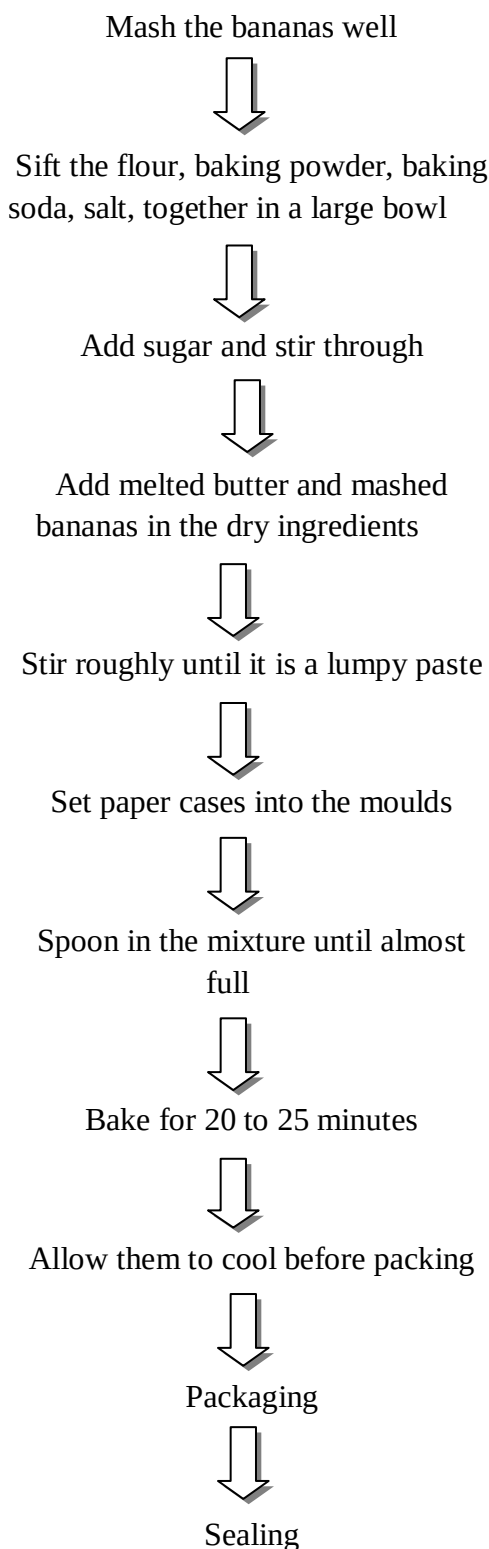
2.1. Formulation of Banana muffin

Formulation of Banana muffins was done with variation also of banana pulp Treatments are followed;

To- Banana pulp 0%
T1- Banana pulp 5%
T2 - Banana pulp 10%
T3 - Banana pulp 15%

TREATMENT/ INGREDIENTS	T ₀ gm	T ₁ gm	T ₂ gm	T ₃ gm
Banana	0	5	10	15
Refined wheat flour	100	95	90	85
Sugar	100	100	100	100
Baking powder	2	2	2	2
Baking soda	2	2	2	2
Butter	25	25	25	25
Salt	2	2	2	2

2.2. Flowsheet for preparation of Banana Muffins



2.3. Procedure

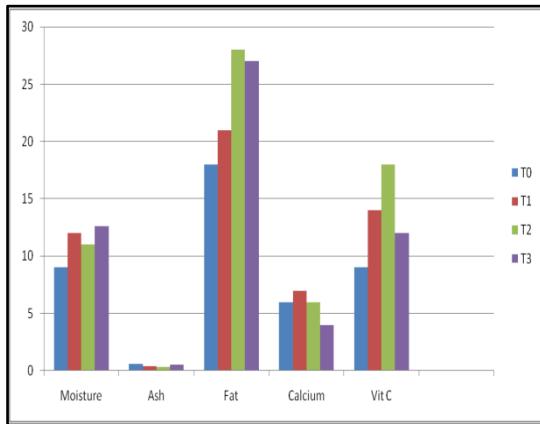
Selection of good quality of ingredients such as refined wheat flour, sugar powder, fat, neem powder and baking powder for obtaining good quality of neem cookies. Weigh all the selected ingredients in the required quantity by using proper weighing balance. Preheat oven to 190 degrees and line muffin tray or tin with papers. Peel the cleaned bananas and mash well. Shift the flour, sugar, baking powder, baking soda, salt together for 2-3 times in a large bowl; set aside. Whisk the mashed bananas and melted butter in a large measuring cup with a spout. Pour wet ingredients into the centre of dry ingredients; then stir with a wooden spoon until the dry ingredients are moistened but still lumpy. Do not over mix the batter or your muffins will come out dense. Divide the batter evenly into the muffin tray. Put the muffins in the oven and immediately reduce oven temperature to 160 degrees. Bake until golden brown, about 25 minutes. (insert a toothpick into the centre of muffin to check if it is done. A toothpick should come out clean.) Cool muffins in the pan for a couple of minutes before packing and after sealing is done.

3. RESULT AND DISCUSSION:

To evaluate the quality as well as acceptability properties of Banana muffin, chemical composition and organoleptic

evaluation of Banana muffin has been carried out in the present investigation.

3.1.Chemical Analysis:

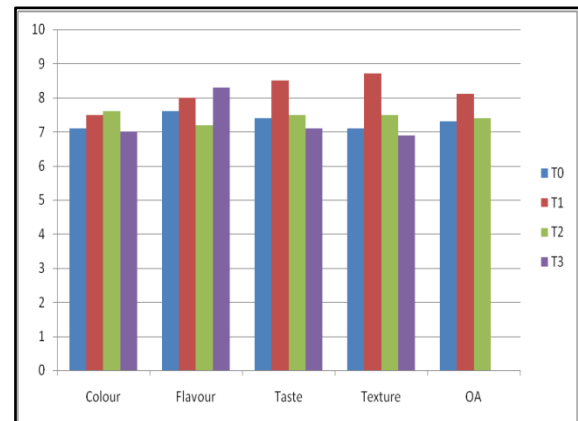


The chemical analysis graphically represented above shows the difference between various chemical parameters with treatment T₁, T₂, T₃. The moisture content of treatment T₁ is 12% following with T₂ is 11% and T₃ is 12.6%. Ash content of treatment T₁ is 0.4 following with T₂ is 0.6 and T₃ is 0.5. The fat content of treatment T₁ is 21gm following with T₂ is 24 gm and T₃ is 22gm. Calcium content of treatment T₁ is 8mg following with T₂ is 6mg and T₃ is 4mg. The standard value for moisture content is 12%, ash content is 0.4, fat content is 21gm and calcium content is 8gm. The source for the standard was taken from nutritional value based on USDA Nutrient Database SR18.

3.2.Sensory evaluation:

The sensory characteristics of the products such as colour, taste, flavour, and texture were evaluated by panel judges using nine-

point hedonic scales. The acceptability and their marks used as follow :



By panel judges ratings the T₁ sample got higher ratings. The sensory evaluation of Banana muffin done by studying the characteristics like. Colour, flavour, taste and texture of product by the panel judges. The average rating for the colour of different treatment of Banana muffin was found to be 8. The average rating for the flavour of different treatment of Banana muffin was found to be 8.

The average rating for a taste of different treatments of Banana muffin to be 8. The average rating for texture was to be 8.

CONCLUSION

From the result, it was concluded that the good quality of Banana muffin was prepared and was more acceptable organoleptically. Amongst the prepared treatments of Banana muffin, the Banana

pulp 5% treatment was found to be a best. Banana muffin is a nutritious value-added with high vitamin e and calcium content and is rich in fat. Considered as one of the most popular value-added product, The study concluded that low-cost Banana could be converted to value-added food products

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